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### FACTORS FORECASTING PATIENT SATISFACTION IN THE EMERGENCY DEPARTMENT OF NISHTER HOSPITAL MULTAN

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**Abstract:**

**Objective:** Patient satisfaction (PS) is an important indicator of quality assessment for the emergency department (ED), which affects patient safety, litigation, reimbursement and consumer satisfaction. Our goal in this study was to identify the factors that affect PS.

**Place and Duration:** This cross-sectional study was held in the Emergency Department of Nishter Hospital Multan for one-year duration from March 2019 to March 2020.

**Method:** Random shifts during a week were selected and all patients disposed from the ED were asked to fill out a revised and validated Persian version of the Press-Ganey questionnaire with the help of a research assistant. Results were analyzed using a linear regression model by SPSS software version 21.

**Results:** The results confirmed some of the factors described above needs to be improved. These include longer gate processing area times ( $P < 0.001$ ) and live discharge information ( $P < 0.001$ ) that improve PS that have a negative impact on satisfaction. Other important factors were found that were not previously concentrated, i.e. We also found that men have a more rewarding ED experience ( $P = 0.002$ ).

**Conclusion:** Cultural expectations can have a significant impact on PS. Therefore, each institution must define and change the most relevant expectations for them.

**Keywords:** Emergency Department, Patient Satisfaction, Waiting Time, Gender

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## INTRODUCTION:

Patient satisfaction (PS) is the ultimate goal of any medical institute. Evidence suggests that satisfied patients are more in agreement with their treatment and are more likely to return to future care. The main objective of carvers should be to provide high quality care; and PS is not always compatible with maintenance quality. However, PS defines many results that are important for both doctors and managers, making it an important goal for everyone. There is a debate on the link between clinical performance and PS indicators. Therefore, many decisions of managers are aimed at improving these indicators. In addition, PS research allows insurance companies and the Health Ministry to assess doctors, while consumer-facing websites often report PS results and influence consumer choice.

It is very difficult to get to PS in ED. Meeting caregivers and patients in ED is often complicated by many factors. These intricacies often lead to discrepancies between the quality of service and PS perceived by carvers. Time and resources are usually limited in ED, and caregivers simply cannot meet the discretionary needs of patients to increase their satisfaction. Therefore, a comprehensive assessment of the factors that the SE anticipates can help us improve. The perception and interpretation of satisfaction are generally closely linked to the cultural and socio-economic context, and their development strategies are not universal. In this study, our goal was to assess patient satisfaction at the ED of a large trauma center in Qom, Iran.

## METHODS:

This cross-sectional study was held in the Emergency Department of Nishter Hospital Multan for one-year duration from March 2019 to March 2020. Samples were taken randomly from different shifts. The study included all patients removed from the emergency room during each shift. Patients were excluded if they were unable to answer questions (significant cognitive impairment, were unable to communicate in Farsi) or refused to participate. The questionnaires were filled in prior to the disposition from the SOR. Patients or their designated relatives were introduced to the study by a member of the research team who was not involved in the patient's treatment and was not wearing a uniform. It explained that participating in the study would not have any impact on patient care. Patients or relatives were asked to complete the form in a safe environment with no medical staff present. For any assistance in completing the form (illiteracy, physical limitations, etc.), the interviewer helped accordingly. The questionnaire

used in our study was a modified version of the Press Ganey survey. This instrument is both credible and important to the Iranian population (6). The questionnaire was slightly changed to improve consistency, and items such as number of visits and waiting times were expressed in actual numbers and not in Likert scales. The validity of the final questionnaire was obtained by emergency medicine doctors and tested in a pilot study involving 50 patients. The final survey contained three main sections. The first section covered demographic information such as admission time broken down by breaks, gender, age, level of education, place of residence, type of admissions, and being a resident or traveler. The second part includes questions about the length of stay before going to the office, the amount of time spent by the doctor with the patient and the frequency of medical visits. The third part includes questions about the comfort of waiting rooms, kindness of nurses, nursing skills, kindness of security staff, respect for patients' privacy during the examination, courtesy of the patient transferring staff, kindness / kindness of doctors, explanations of doctors to patients about the disease and its conditions, concerns that the caregiver demonstrated in case of questions or concerns of patients, involving patients in making decisions about treatment, educating patients before disposing, overall satisfaction and the possibility of recommending ED of this center to others. Participants were asked to answer the Likert scale claims from 1 (very poor) to 5 (very good). Data were analyzed using SPSS version 21. For continuous variables, we used the mean and standard deviation. For discrete variables, frequency and mode were used respectively. The main results were considered to be the result of general patient satisfaction and the willingness to recommend HED to other people. Using a forward linear regression model, the impact of demographic variables and different questionnaire items on these two outcomes was analyzed. A p value of less than 0.05 was considered significant. The study was reviewed and approved by the research and ethics center.

## RESULTS:

A total of 499 patients were included in the study. More than 60% of the patients were male, and about half of the patients were admitted to the hospital earlier. Most patients arrived in the evening, and only 5.6% arrived for a night shift. Most of the participants attended secondary schools. The most common group of patients aged 19 and 35 years. Approximately 80% of patients were discharged from ED and 4 (0.8%) against medical advice. Table 1 summarizes the demographics of the participants.

**Table 1.** Demographic distribution of participants<sup>a</sup>

	Number	Percent
Person answering		
Self	263	52.7
Relative	236	47.3
Time of attendance		
Morning	175	35.1
Evening	296	59.3
Night	28	5.6
History of previous attendance		
Had previously attended our ED	247	49.5
First time attending our ED	252	50.5
Gender		
Male	301	60.3
Female	198	39.7
Level of education		
Primary	85	17.0
Secondary	219	43.9
University	49	9.8
Other	146	29.3
Place of residence		
Qom	443	88.8
Suburbs	39	7.8
Other	12	2.4
Age groups		
Below 18	163	32.7
19 to 35	197	39.5
36 to 60	106	21.2
Over 60	33	6.6
Disposition		
Discharged	395	79.2
Admitted	98	19.6
Transferred	2	0.4
Leaving against medical advice	4	0.8

All items answered on the Likert scale received good or very good ratings (registration speed, lounge status, information provided by the guardian). For more information, see Table 2.

**Table 2. Satisfaction with 16 items**

	Very poor	Poor	Fair	Good	Very good
Speed of the registration process	6.4	6.6	15.0	36.9	34.7
Courtesy of registration staff	5.6	6.4	14.4	35.7	37.3
Comfort of the waiting area	4.8	7.0	13.8	37.9	35.1
Attention to patient privacy	4.6	7.0	13.4	36.1	37.3
Courtesy of the nursing staff	4.2	6.8	12.8	36.5	37.7
Quality of nursing care	4.4	6.6	14.2	34.9	36.3
Courtesy of the security staff	4.8	6.8	12.6	35.1	36.9
Courtesy of staff who transfer patients	4.8	6.6	11.8	34.9	37.9
Courtesy of the physician	5.2	6.2	10.0	33.5	40.9
Physician's explanations	5.0	6.4	11.4	34.5	38.3
Physician's response to questions	5.4	6.2	9.8	34.5	37.5
Involving patients in treatment decisions	5.0	7.8	10.8	33.1	33.3
Information provided about medication	4.6	6.4	10.8	34.5	32.3
Information on follow up	4.4	6.4	10.0	32.7	35.1
Overall satisfaction	4.0	6.0	12.2	33.9	41.9
Satisfaction with cleanliness	4.0	6.6	12.8	35.3	38.1

The average time between selection and arrival at the treatment site ranged from 60.7 to 95.6 minutes. The average time from arrival to the doctor's visit in the treatment area was 9.4-22.8 minutes. The average time spent by a doctor with patients was 7.3-3.8 and the average number of visits was 2.0-0.8. When it comes to recommendation for others, 36.5 percent responded and 35.7 percent responded.

Results showed that factors contributing to overall patient satisfaction with ED services were aimed at clearing the area, following up by a doctor, satisfying the staff responsible for transferring patients and providing treatment with triage to the treatment area in less time. Factors related to the patient's desire to recommend ED to others: satisfaction with the purity of the treatment area, satisfaction with the speed of the registration process, satisfaction with the staff responsible for transferring patients, shorter waiting time from triage to treatment area and male sex. We don't see any connection, including demographics and results. Table 3 shows the results of linear regression analysis.

**Table 3. Factors influencing outcomes based on linear regression analysis**

Outcomes	Factors influencing outcome	Standardized Coefficients (Beta)			
		B	SE	t	P
Overall satisfaction	Satisfaction with ED cleanliness	0.392	0.068	5.782	0
	Satisfaction with staff in charge of patient transfers	0.311	0.058	5.379	0
	Satisfaction with information provided about follow-up	0.149	0.044	3.384	0.001
	Duration of time from entrance to treatment area	-0.001	0.001	-0.095	0.036
Tendency to suggest the ED to others	Satisfaction with ED cleanliness	0.728	0.056	12.889	0.000
	Satisfaction with speed of the registration process	0.179	0.061	2.944	0.004
	Duration of time from entrance to treatment area	-0.002	0.001	-0.123	0.000
	Gender	-0.311	0.098	-0.111	0.000
	Satisfaction with staff in charge of patient transfers	0.121	0.055	2.225	0.027

## DISCUSSION:

There are many reasons to consider PS as the primary goal of ED. Satisfied patients are more likely to follow treatment, so their well-being will increase. Satisfied patients are also less likely to take responsibility. In addition, financial returns and "consumers" depend on the future return of the PS. Iran enjoys subsidized global health, but administrators and researchers still see PS as an indicator of success at the medical institute. Our study showed that ED purity is an important indicator of overall satisfaction and willingness to recommend ED to others. Similarly, courtesy of patient-borne staff, non-medical aspects of patient care have been shown to play an important role in patient satisfaction. In addition, our study shows two time-dependent factors (speed of the registration process and time from classification to treatment area) as important factors for PS. This suggests that patients are the key to satisfaction with the duration of the procedure before starting treatment. Finally, doctor-patient interactions had an undeniable effect on the overall patient satisfaction, because the doctor's desire to provide supplementary information.

Preliminary sun et al studies identified six factors related to low satisfaction in ED. They conducted a systematic review of PS in ED in 2004, not receiving assistance if necessary, a false explanation of the problem or test results, lack of information about waiting times, time to resume normal activities, and not understanding when to return to ED. Boudreux and O'Hea. They found that interpersonal interactions with ED providers were the most powerful factor associated with ED. Interpersonal interactions are classified as quality of expression (i.e. the ability of the caregiver to show empathy and appropriate kindness) or to provide information (i.e. the readiness and ability of staff to provide information about the maintenance process). The authors also noted several studies in which the technical skills of doctors and nurses contributed to PS, but claimed that caregivers with better interpersonal skills from the patient's point of view were considered more capable. Boquiren and others found that patient satisfaction with the doctor was the most important aspect of care. The authors are the determinants of ps with a doctor as five domain names: Communication Qualifications, Relational Behavior, Technical Skills and Knowledge, Personal Qualifications, Usability and Accessibility. They also suggested that doctor training should focus on these areas. The Taylor and Benger review points to two service factors affecting ps in this area. These include interpersonal skills and perceived employee attitudes, knowledge provision and disclosure. In

our study, we found two types of factors that affected ps. They included doctors providing patients with tracking information and courtesy of the staff responsible for patient transfer. In addition, we see logistical factors such as the speed of the cleaning and recording process as important factors.

Boudreux and O'Hea found no connection between gender, marital status, insurance status, the presence of pain, the number of visits before ED, arrival time/day, satisfaction with registration and overall patient satisfaction and other demographic variables. Instead, you can find gender and staff courtesy of patient transfer as important factors. Race has rarely been considered an important variable affecting PS in ED. It has been suggested that women are more likely to respond to PS studies, and that patients are more satisfied with the role of gender in environments other than ED. Zohrevandi and Tajikistan, this discovery reihani et al, Son and Yom and Abolfotouh et al, this may be because women are more tolerant. In our study, female sex was significantly associated with less satisfaction. This may be related to the different expectations of women in an extremely religious environment, such as Qom, which cannot be met in an ED environment. First, this staff spends more time with patients compared to other caregivers. Secondly, they engage in sincere and physical activities, such as helping patients who are more receptive than other staff efforts. It seems that if this aspect of care is done with kindness and respect around us, it can be a source of gratitude and satisfaction.

Time-oriented indicators are presented as effective factors in PS. This study showed that the registration rate for arrival in the triage treatment area and the time results were important factors. Welch says that getting to see a doctor is the most important time for PS. Other studies have reported similar results, which are an important indicator of satisfaction, from arrival and classification to the doctor's appointment. In other words, longer waiting times lead to dissatisfaction. However, studies conducted by Arabs and colleagues at TEhran DE have shown a significant correlation between variable providers of time, treatment and length of stay and leaving without PS at all. It is suggested that time-related issues, in particular perceived time, are a determinant of PS. In our study, we see that the speed of registration is an important factor. This is because patients prefer to be cared for as soon as possible, and any paper work is considered unnecessary. This can be fueled by the belief that a faster registration process can lead to a faster doctor's visit. The level of triage, ps

other commonly reported estimates, may actually reflect a shorter waiting time for sick patients.

The above factors affecting PS are not limited to the factors discussed here. Zohrevandi and Tajikistan reported a correlation between the PS and the adoption period. In a separate study, Damghi et al listed the following 3 elements as arguments that estimate less satisfaction: the distance of life in hospital, weekday income and educational level. Suleymanpour et al. They also reported that higher education is associated with increased dissatisfaction. Several studies have shown that older patients are more satisfied with the care they receive. Another interesting factor registered by Abolfotouh et al was the improvement of symptoms, as reported by the patient. Pines and Ark also reported a strong link between ED overpopulation rates and low PS scores.

In our study, there is no link between the main results and demographic surveys. This is in line with previous studies. The demographics of our study are where we live, educational level, age, gender and time to join ED. None of these variables affect our main results outside of gender. This means that there are many variables in the ED that affect PS that can be modified and improved.

### CONCLUSION:

Factors affecting PS are many. Some of these factors even contradict what carers consider to be best clinical practice. Therefore, it must be admitted that patients are not the best in assessing clinical quality (26). Nevertheless, achieving PS has many advantages, making it one of the prime goals of any medical institute. The literature reveals many factors related to PS. They range from bedside attitude and empathy to the sex and physician's attire, allowable waiting times, technical skills, pain management, use of bedside ultrasound, privacy, cleanliness and safety (4). Some factors are difficult to change, but others can be easily changed to increase satisfaction. Fortunately, the interventions were adequately effective (17, 29-29). For some institutions, depending on the population served, some of these factors may be more important than others. At our center, we found that the factors most associated with PS could be logistical (cleanliness), HR (courtesy of relocation), process (speed of registration) and medical (providing information on follow-up).

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